

REMARKS/ARGUMENTS

Claims 1-56, 83-85, 96-106, 130-133, 136-139 and 142-189 are pending.

Claims 1-5, 9, 14-21, 24, 30-32, 38-39, 46-53, 57, 83-85, 96-100, 105-106, 131, 133, 155-162, 164-171 and 189 stand rejected under 35 USC §103(a) as being unpatentable over Miller (U.S. Patent No. 5,805,911) in view of Hachamovitch et al. (U.S. Patent No. 6,377,965).

Claims 6, 8, 10-11, 130, 132 and 136-139 stand rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch and further in view of Agulnick et al. (U.S. Patent No. 5,347,295).

Claim 7 stands rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch and further in view of Forcier (U.S. Patent No. 5,220,649).

Claims 12-13 and 26 stand rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch and further in view of Niemeier (U.S. Patent No. 5,574,482).

Claims 22-23, 25, 33-34, 54-55, 101-104, 142-145, 163 and 172-188 stand rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch and further in view of Skinner et al. (U.S. Patent No. 6,661,920).

Claims 27-29 stand rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch, further in view of Skinner and further in view of Lee (U.S. Patent No. 6,292,179).

Claim 35 stands rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch, further in view of Skinner, and further in view of LaGrange et al. (U.S. Patent No. 5,896,321).

Claims 36-37 and 40-42 stand rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch, further in view of Skinner, and further in view of Bi et al. (U.S. Patent No. 6,262,719).

Claim 43 stands rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch, further in view of Skinner, further in view of Bi, and further in view of LaGrange.

Claim 44 stands rejected under 35 USC §103(a) as being unpatentable over Miller in view of Hachamovitch, further in view of Bi and further in view of Skinner.

These rejections are respectively traversed and reconsideration is respectfully requested.

It is respectfully submitted that in order to establish a prima facie case of obviousness, three basic criteria must be met. First, the Examiner must identify prior art declaring all the salient elements recited in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Third, there must be a reasonable expectation that once combined the elements will work as expected. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. In Re Vaeck, 947 F.2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991).

As will become apparent herein, it respectfully submitted that all of the elements recited in the claims are not taught or even suggested in the cited references. Additionally, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings.

The Miller Reference

It is respectfully submitted that the Examiner has conceded a deficiency in the Miller reference. Specifically, the Examiner admits that Miller fails to teach obtaining predictions in response to a first character of a partial text entry (see office action, page 3, paragraph 3). However, the Examiner asserts that Miller's negative declaration at column 12, lines 19-28 about too many wrong predictions if search criteria are not applied "*is merely an opinion of the inventor*" (see office action, page 40). Thus, the Examiner asserts that Miller does not teach away from responding to a first character of a partial text entry.

It is respectfully submitted that if this type of view is correct, then it would seem that any negative statement by the inventor may be dismissed by as a mere "*opinion*" without

regard to whether it is teaching away from the claimed invention. Thus, teaching away could never be shown since any negative statement might be characterized as a mere opinion of the inventor. It is respectfully submitted that the issue is not whether Miller's declaration at column 12, lines 19-28 expresses an opinion of the inventor (since presumably it does as does as every other statement in the patent), but rather whether it would seem that the opinion expressed by the inventor has the effect of teaching away from the applicant's claimed invention.

As noted in MPEP §2143.01, a proposed modification to a reference cannot render the reference unsatisfactory for its intended purpose or change the principal of operation of the reference.

It is respectfully submitted that the Examiner has failed to appreciate that Miller expressly teaches away by disclosing that an element claimed by the applicant should not be used. In particular, Miller expressly teaches one skilled in the art to avoid using short partial data entries to obtain word completion suggestions (col. 12, lines 19-28). As stated in column 12, lines 19-24, Miller teaches that short partial data entries "are too short to serve as a reasonable indication of the complete data entry that the user is in the process of entering" and that obtaining and displaying completion suggestions based on such short partial data entries is therefore undesirable. In fact, Miller teaches the use of a search criteria precisely in order to avoid annoying the user by displaying an excessive number of wrong completion suggestions. As stated by Miller:

"To avoid annoying the user by displaying an excessive number of wrong suggestions, the text completion system applies search criteria to the partial data entry. If the partial data entry satisfies the search criteria, the text completion system obtains a prioritized list of word predictions for the partial data entry from a word prediction system." (See col. 4, lines 32-37);

"In response to the pause, the text completion system determines whether the partial data entry satisfies search criteria. For example, the text completion system may determine whether the partial data entry satisfies the search criteria by receiving a user command establishing a predetermined number of characters. The text completion system may then determine whether the partial data entry includes at least the predetermined number of characters. If the partial data entry satisfies the search criteria, the text completion system

obtains a prioritized list of word predictions for the partial data entry from a word prediction system.” (See col. 5, lines 4-14);

“The search criteria allows the text completion system 200 to avoid annoying the user by displaying an excessive number of wrong completion suggestions. In particular, the search criteria allows the text completion system 200 to avoid displaying completion suggestions when the partial data entry 204 is too short to serve as a reasonable indication of the complete data entry that the user is in the process of entering. The search criteria, therefore, typically requires that the partial data entry 204 include at least a minimum number of characters. For example, the minimum number of characters set by the search criteria may be a user-definable parameter with a default value of three. (See column 12, lines 17-22); and,

“To avoid annoying the user by displaying an excessive number of wrong suggestions, the text completion system applies search criteria to the partial data entry. If the partial data entry satisfies the search criteria, the text completion system obtains a prioritized list of word predictions for the partial data entry from a word prediction system.” (see abstract).

Additionally, the Examiner indicates that he “cannot find a recitation declaring that the inclusion of short partial data entries would render Miller’s invention inoperable” (See p. 40, para. 2 of the office action). This position seems in error and untenable. It is respectfully submitted that there are two branches to the doctrine of “teaching away” in the U.S. A reference teaches away expressly by disclosing that a claimed element should not or cannot be used. A reference teaches away impliedly when a modification or combination would render the invention disclosed therein significantly inoperable. In evaluating the Miller reference for the presence of “teaching away,” the Examiner appears only to have considered whether Miller declares expressly that the applicants’ claimed limitation would render Miller’s invention inoperable. Effectively, the Examiner appears to have focused solely upon the second sub-branch of the doctrine of express teaching away, viz., an express declaration by an inventor that a claimed element cannot be used. However, teaching away may exist even in the absence of express declarations that a claimed element cannot be used. It is respectfully submitted that to establish teaching away it is sufficient that a skilled person “would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path

that was taken by the applicant.” In *Re Gurley* 27 F.3d at 553, which is cited in *In Re Daniel S. Fulton and James Huang* (04-1267, regarding Ser. No. 09/122,198) at p. 8. For teaching away to occur, it is sufficient for a reference to “criticize, discredit, or otherwise discourage the solution claimed...” In *Re Daniel S. Fulton et al.* In *Ex Parte Bassel H. Daoud* (USPTO Board of Patent Appeals, Appeal No. 2002-0507), applicant’s claimed invention was deemed to be non-obvious in light of a reference that criticized prior art connecting blocks as having various disadvantages (e.g., being labor intensive, having a large number of wires, etc.):

“Because the reference leads in a direction divergent from a connecting block with wire wrap pins extending upwardly therefrom [applicant’s claimed invention], we are persuaded that it teaches away from attaching Dennis’ telephone mounting bracket to a connector block having wire wrap pins extending upwardly therefrom. Therefore, we reverse the obviousness rejection of claim 10.”

Finally, the Examiner has also made the following argument against “teaching away” (See p. 40 of the Office Action). “The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981)”

At this point, the Examiner seems to have merely quoting boilerplate paragraph 7.37.02 provided in MPEP 707.07(f) against “bodily incorporation.” It is respectfully submitted that this argument is inapplicable. A reference that teaches away cannot be cited in an obviousness rejection.

The Hachamovitch Reference

As noted above, the Examiner concedes that Miller is deficient by not disclosing certain elements of the present invention as claimed. However, the Examiner has referred to another reference specifically, Hachamovitch et al., in order to "teach the deficiencies pointed out by the applicant with regard to Miller" (see page 39, paragraph 3 of the office action). However, it is respectfully submitted that the Hachamovitch reference does not teach the Examiner's conceded deficiencies of the Miller reference. It is respectfully submitted that, like Miller, the Hachamovitch reference actually teaches away from the present invention in essentially the same manner as Miller. Thus, it is respectfully submitted that the Hachamovitch reference shares the Examiner's conceded deficiencies of the Miller reference. Indeed, note how extremely similar Hachamovitch's "prediction criteria" are Miller's "search criteria":

"The word completion system applies prediction criteria to avoid annoying the user by displaying an excessive number of wrong suggestions." (See the Abstract)

"The word completion system applies prediction criteria to avoid annoying the user by displaying an excessive number of wrong suggestions." [emphasis added] (See Column 4, lines 15-17)

"The word completion system applies prediction criteria to avoid annoying the user by displaying an excessive number of wrong suggestions. For example, the suggested word completions are not displayed unless the partial data entry has at least three characters, the completion entry has at least three characters more than the partial data entry, and the partial data entry unambiguously corresponds to one particular name-completion pair in the selected suggestion list." (See Column 6, lines 53-57)

"In step 503, the current file receives a character, typically a keyboard or other text entry. In the following steps 504-512, the Auto-Complete utility 100 applies prediction criteria to determine whether to display a word completion suggestion for the current data item. The Auto-Complete utility 100 applies the prediction criteria to avoid annoying the user by displaying an excessive number of wrong suggestions. For this purpose, the current data item may be a partial data entry including the characters received since the last delimiter character, including the character received in step 504. A delimiter character is a character that signifies the end of a word, such as a space character or punctuation mark.

In step 504, the Auto-Complete utility 100 determines whether a minimum number of characters has been entered since the last delimiter character. That is, the Auto-Complete utility 100 determines whether the current data item includes at least a minimum number of characters. The minimum number of characters for step 504 is preferably a user-definable parameter with a default value of three. If the minimum number of characters has not been entered since the last delimiter character, the "NO" branch is followed back to step 501, in which the data file receives another character." [...and only if YES branch is followed, is a prediction made...] (See Column 14, lines 42-65)

It is respectfully submitted that the Examiner has erroneously relied on the following passage to argue that Hachamovitch et al., in contrast to Miller et al., teach responding to a first character, viz., a letter "M":

"Each suggestion list may also be limited to name-completion pairs in which the completion entries have a predefined property, such as initial letter capitalized, all letters capitalized, occurring at the start of a paragraph, occurring at the end of a paragraph, and so forth. For example, the word completion "Microsoft Corporation" is only suggested when the partial data entry begins with the "M" capitalized. Thus, the word completion system does not suggest "Microsoft Corporation" when the user types "mic" on the way to typing "microphone" or "microcomputer."" (See Column 7, lines 31-38)

However, it is respectfully submitted that the above passage does not teach that the word completion is made in response to the "M" being typed. Rather, the word completion is only suggested when the partial data entry begins with the "M" capitalized. The above passage appears to describe the application of a context/capitalization test illustrated in block 512 of Figure 5 (column 15, lines 40-54; cf. context and capitalization limitations 306 and 308 in Figure 3, described at column 11, line 66). But from the plethora of quotations provided above and from Figure 5, it is evident that the word completion is suggested only after the partial data entry has met the "prediction criteria" of having at least a minimum number of characters (by default, 3), just as in the Miller reference. For example, in Figure 5, the context/capitalization test applied in block 512 is applied only after the "prediction criteria" has been applied in block 504 in Figure 5 (cf. column 14, lines 55-61). This order of steps is also implicit in the very passage cited by the Examiner. Notice that the word completion is suggested "when the user types 'mic'

on the way to typing 'microphone' or 'microcomputer'", that is, after 3 letters are typed, meeting the default prediction criterion (requiring at least 3 characters before a prediction is made). The example cited by the Examiner appears to be explained in further detail in Figure 2B and at column 11, lines 4-14, and column 11, line 66 to column 12, line 8. These passages do not support the Examiner's interpretation that predictions are returned in response to a first character being typed. While Hachamovitch et al. provide examples of MS-Word AutoComplete functionality (including the Examiner's reference to the "Microsoft" completion) in Figures 2A, 2B and 2C, in every single instance, the screen shots show that at least three characters have been typed.

No Motivation To Combine Miller and Hachamovitch

It is respectfully submitted that the Examiner has failed to provide a suggestion or motivation to combine the Miller and Hachamovitch references that is found in the references themselves and not in the present disclosure. With regard to claim 1, the Examiner states that "combine the teachings of Miller and Hachamovitch provides the benefit of offering suggestions based on as few as a single character, therefore increasing the variety of suggestions." However, it is respectfully submitted that this argument could not be valid in light of the inapplicability of Miller, and further the applicability of Hachamovitch.

For example, regarding claim 1, the Examiner says that combining the teachings of Miller and Hachamovitch "provides the benefit of offering suggestions based on as few as a single character, therefore increasing the variety of suggestions". This argument would not seem valid in light of the inapplicability of Miller, and further the inapplicability of Hachamovitch.

Furthermore, the Examiner is arguing against the teachings of both Miller and Hachamovitch. As noted earlier, Miller and Hachamovitch both teach that it is a detriment to obtain candidates when the partial text entry is fewer than a minimum number of characters. In effect, the Examiner is adhoc revising the teachings of Miller and Hachamovitch to suit his own opinion. Note that it is not a greater variety of suggestions that Miller and Hachamovitch are after, but fewer predictions having greater accuracy. Neither Miller nor Hachamovitch view offering suggestions based on as few as a single character to be desirable due to the overly high

incidence of wrong completion suggestions. Thus, the Examiner provides a motivation or suggestion to combine the references which is not present in the references themselves, and in fact, that contradicts the references' express teaching.

In contrast to the Miller and Hachamovitch references, applicants have disclosed a system which provides useful results even with one character entered. The applicants' system provides an interactive search list containing a plurality of completion candidates, which can be selected as completion candidates or used to obtain from the dictionary a more refined list of completion candidates to choose from. In the applicants' system, even partial successes at prediction based on the first character have the potential to be rewarding since the user can iteratively invoke the search system to perform a further search after selecting a partially successful completion candidate. In contrast, Miller discloses causing the word completion list to disappear after a completion is chosen, to wait for the next character input. Hachamovitch fails to disclose providing even a word completion list, but rather provides a single word completion suggestion which may be selected or not.

With respect to claim 1, the Examiner takes the position that Miller teaches element (b), when combined with Hachamovitch, since the latter "allows for the partial text entry to consist of a single character." It is respectfully submitted that this argument is inapplicable given that both Miller and Hachamovitch teach away from the claimed invention and thus it is not obvious how to combine their teachings to arrive at the claimed invention. Moreover, it is respectfully submitted that this argument is simply wrong. As discussed above, Hachamovitch et al. teach waiting for a minimum number of characters to be entered (by default, 3).

Finally, the question is not whether Hachamovitch "allows for the partial text entry to consist of a single character," as the Examiner puts it, but whether prediction is invoked in response to the single character. But Hachamovitch teaches away from providing predictions based on too few characters (e.g., 1).

In summary, both Miller and Hachamovitch expressly teach that it is at best useless, and at worst counterproductive (e.g., "annoying"), to provide word predictions based on a single character. But the applicants' system does precisely what these references teach is

useless or even counterproductive, therefore the applicant's claim cannot be obvious without the benefit of impermissible hindsight.

Use of Official Notice

The Examiner concedes that Miller fails to teach element (e) of claim 1 ("if... first type of user selection"... "deactivating the search list"). Nevertheless, the Examiner argues, without instant and unquestionable support, that "it is notoriously well known in the art of pen-based computing to dismiss windows," and thus it is obvious according to the Examiner. It would appear that the Examiner is inappropriately relying on official notice, particularly after having relied in the first Office Action on art-based arguments. On the aspects in question, he has abandoned his previous art-based arguments (which he deemed necessary in the first instance) and is applying, in a final office action, unsubstantiated official notice. Moreover, the Examiner seems to have erred temporally, referring to the present day use of pen-based computing systems, rather than use at the relevant invention date for the present application.

However, even if, at the relevant date, it was notoriously well known to "deactivate windows," as the Examiner alleges, that does not do justice to the language of the applicants' claim, which recites "a first type of user selection" and also a "second type of user selection," wherein the two types of user selection have different outcomes. The Examiner fails to show how this was notoriously well known at the relevant date.

Thus, it is respectfully submitted that with all the references that are of record in this case, applicants believe that it is improper for the Examiner to no longer rely on references in rejecting claims 1, 98, 159, 168, 99, 158, 161, 165, 167, 169, 100, 162, 170, 34 and 37 and to now reject them by taking official notice and asserting common knowledge with regard to elements of these claims. As noted in MPEP 2144.03(A) official notice without documentary evidence to support an Examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when application is under final rejection or action under 37 CFR §1.113. Official notice unsupported by documentary evidence should only be taken by the Examiner by the facts asserted to be well-known, or to be

common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. Thus, as noted above, applicants believe that the official notice taken by the Examiner is improper in this case since in the previous action on the merits, the Examiner rejected various elements by relying on prior art reference. Applicants argued against these references and now, the Examiner is no longer relying on these references, but simply taking official notice. As noted above, given all the references of record in the present case, applicants believe that the Examiner should have readily been able to produce documentary evidence as opposed to taking office notice.

Accordingly, applicants respectfully traverse the Examiner's assertion that, with regard to claim 1, it is notoriously well known in the art of pen-based computing to dismiss windows such as a text completion window once a user has finished with it. With regard to claims 98, 159 and 168, applicants respectfully traverse the Examiner's assertion "that displaying ... a graphical indication where at least one more additional candidate beginning with the partial text entry is available in addition to the completion candidates displayed in the search list is a notoriously well-known feature in the art of graphical user interfaces for offering more options. With regard to claims 99, 158, 161, 165, 167 and 169, applicants respectfully traverse the assertion by the Examiner that "displaying the completion candidates in the search list with the part of each completion candidate matching the partial text entry displayed in any manner are different from the remaining part of each of the completion candidates displayed in the search list" is a notoriously well-known feature in the art of graphical user interfaces for distinguishing entries. With regard to claims 100, 162 and 170, applicants respectfully traverse the Examiner's assertion that "displaying a completion in substantial the same position in the search list each time the completion candidate is displayed in the search list" it was then obvious to one of ordinary skill in the art at the time of invention to expect this behavior as one would expect a sequence of events described by Miller to be repeatable for a given-like user input, providing the benefit of predictability and repeatability in a user interface. With regard to claim 34, applicants respectfully traverse the Examiner's assertion that "hiding the digital keyboard in response to another user selection" is notoriously well known in the art of pen-based computing to dismiss

windows such as a digital keyboard once a user has finished with it. With regard to claim 37, applicants respectfully traverse the Examiner's assertion that "relocating the cursor to a center to a digital keyboard when a character from the digital keyboard is selected" is notoriously well known in the art of graphical user interfaces as one desires to quickly identify which window is currently from among multiple windows. Finally, applicants respectfully traverse the Examiner's response to applicants' previous arguments in that the Examiner contends that limitation (e) of claim 1 is notoriously well known in the art of pen-based computing to dismiss windows such as a text completion window once a user has finished with it.

Claims 83 and 84

It is respectfully submitted that the Examiner did not fully respond to the arguments with respect to claims 83 and 84 presented in applicants' response mailed July 9, 2004. Accordingly, applicants are presenting them again.

In applying Miller to Claim 83, the Examiner has pointed to step (428) in Fig. 4 as disclosing the subject matter of element (e) of Claim 83. The Examiner has further cited column 5, lines 28-35 as disclosing the subject matter of element (f) of Claim 83. However, it appears that the Examiner may have misinterpreted these two portions of Miller as disclosing distinctive subject matter, whereas, in fact, column 5, lines 28-35 in Miller are merely a summary of the subject matter described by block 428 in Figure 4. In other words, both citations refer to the same thing. Both citations describe the response (discontinuing the display) to just one type of user selection (an acceptance command). However, in Claim 83, elements (e) and (f) recite two different types of user selections. Therefore, the objection would appear to be improper and should be withdrawn. If the Examiner disagrees, the applicant respectfully requests that the Examiner clarify precisely how the subject matter in block 428 of Figure 4 amounts to a "first type of user selection" whereas the subject matter in column 5, lines 28-35 amounts to a "second type of user selection" as claimed by applicant.

The Examiner also appears to assert by analogy that element (g) of Claim 83 is somehow comparable to element (d) in Claim 81, although the Examiner has not made clear how this is the case. As explained above in relation to Claim 81, Appelman fails to disclose a "search

list” having completion candidates and being based on a partial text entry. Moreover, Claim 83 recites, in part: “(g)... dynamically obtaining a refined list of completion candidates based on one of the completion candidates from the search list”; and “displaying the refined list of completion candidates in the search list for further user selection...” These aspects of element (g) also are not disclosed or suggested by Appelman inasmuch as they depend on having a “search list” as claimed. Thus, Appelman does not disclose element (g) of Claim 83. Applicant concurs with the Examiner’s statement (at p. 22 of the Office Action) that Miller also fails to teach element (g) of Claim 83.

Accordingly, Miller and Appelman fail to disclose or suggest, either alone or in combination, all of the elements of Claim 83 in combination. Therefore, it is respectfully submitted that the rejection of Claim 83 is improper and should be withdrawn.

Claim 84 is a system claim comprising computer-readable instructions for, in element (c)(v), deactivating the search list if the user input signal corresponds to a first type of user selection, and computer-readable instructions for, in element (c)(vi), replacing the partial text entry with a completion candidate from the search list if the user input signal corresponds to a second type of user selection. The Examiner refers to block 428 of Figure 4 and to column 5, lines 28-35 of Miller, as disclosing elements (c)(v) and (c)(vi) in Claim 84. As indicated earlier, column 5, lines 28-35 in Miller is a summary of the subject matter illustrated by block 428 in Figure 4. In other words, both citations refer to the same thing: both citations describe the response (discontinuing the display) to just one type of user selection (an acceptance command). In applicant’s Claim 84, elements (c)(v) and (c)(vi) are clearly distinct, and correspond to two different types of user selections. Therefore, the objection should be withdrawn. If the Examiner disagrees, the applicant respectfully requests that the Examiner clarify precisely how the subject matter in block 428 of Figure 4 amounts to a “first type of user selection” whereas the subject matter in column 5, lines 28-35 amounts to a “second type of user selection”, as claimed.

Appl. No. 09/631,101
Amdt. dated August 15, 2005
Amendment under 37 CFR 1.116 Expedited Procedure
Examining Group 2176

PATENT

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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